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(19) **United States**(12) **Patent Application Publication**
BIELAS(10) **Pub. No.: US 2021/0317526 A1**(43) **Pub. Date: Oct. 14, 2021**(54) **COMPOSITIONS AND METHODS FOR
ACCURATELY IDENTIFYING MUTATIONS**(71) Applicant: **Fred Hutchinson Cancer Research
Center, Seattle, WA (US)**(72) Inventor: **Jason H. BIELAS, Seattle, WA (US)**(21) Appl. No.: **17/356,293**(22) Filed: **Jun. 23, 2021****Related U.S. Application Data**

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(57)

ABSTRACT

The present disclosure provides compositions and methods for accurately detecting mutations by uniquely tagging double stranded nucleic acid molecules with dual cyphers such that sequence data obtained from a sense strand can be linked to sequence data obtained from an anti-sense strand when sequenced, for example, by massively parallel sequencing methods.

Specification includes a Sequence Listing.